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REMARKS/ARGUMENTS

The Examiner rejected claim 16 under 35 U.S.C. 112, second paragraph, as lacking sufficient antecedent basis for "the biological tissue". This expression has been replaced by "the region of interest of the animal" to track the language of claim 1.

The Examiner rejected claim 39 under 35 U.S.C. 112, second paragraph, as being a claim for a system that is dependant upon a method claim. As the Examiner correctly deduced, claim 39 was intended to depend not upon claim 21, but claim 22 and the claim has been amended accordingly.

Please note that applicant has amended claim 1 to correct typographical errors in the numbering of the steps of the method.

The Examiner rejected Claims 1, 8, and 22 under 35 U.S.C. 102(b) as being anticipated by U.S. Patent 5,962,852 to Knuettel *et al.* This rejection is respectfully traversed.

Knuettel *et al.* teaches the detection of analytes in a scattering matrix, which matrix may be comprised of biological tissue contained in an animal. The light irradiating the matrix is propagated thereto via optical systems composed of components such as lenses, mirrors, and pinhole diaphragms. The primary light and secondary light optical systems disclosed are fixed relative to each other. In contrast to the present invention, the invention disclosed by Knuettel *et al.* involves contact between the examination apparatus and the matrix examined (see column 5, lines 33-35 and column 7, lines 5-12). Therefore, there is no teaching in Knuettel *et al.* of a method for collecting optical data via free space optics for use in time resolved optical imaging of an animal, as claimed in claim 1, nor a system applying such a method, as claimed in claim 22, in which there is no contact between the examination apparatus and the animal. Furthermore, the free-space optics arrangement of the present invention allows, as claimed in claim 1, the exclusion of light emanating from points other than the predetermined collection points. There is no such teaching in Knuettel *et al.*

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Furthermore, in view of the fact that claim 8 is dependant on claim 1, it is respectfully submitted that it is also not anticipated by Knuettel *et al.*

The Examiner rejected claims 2-7, 18, 23, 24, and 37 under 35 U.S.C. 103(a) as being unpatentable over Knuettel *et al.* in view of U.S. Patent 5,772,588 to Miwa *et al.* This rejection is respectfully traversed.

It is respectfully submitted that Knuettel *et al.* in view of Miwa *et al.* does not teach the method as claimed in claim 1, nor the system as claimed in claim 22, and as all of the rejected claims referred to above are dependant upon claims 1 or 22, neither are they so taught. As argued above, Knuettel *et al.* does not teach a method nor a system for collecting optical data for use in time resolved optical imaging of an animal whereby there is no contact between the examination apparatus and the animal. It is respectfully submitted that neither does Miwa *et al.* teach such a method or system. Although Miwa *et al.* discloses the illumination of a sample and the collection of light therefrom through the use of optical components (see figs. 5 and 8, and column 8, lines 57 and following). Miwa *et al.* only discloses a method and system wherein there is contact between the sample and measurement apparatus (see column 12, lines 26-32, and fig. 10). Therefore, neither does Knuettel *et al.* alone, nor in view of Miwa *et al.*, teach the method or system claimed in claims 1 and 22, respectively, nor any of the claims dependant thereupon.

The Examiner rejected claims 9 and 15-17 under 35 U.S.C. 103(a) as being unpatentable over Knuettel *et al.*, finding that the claims were obvious to one of ordinary skill in the art at the time of the invention. The Examiner is respectfully referred to the argument above, which establishes that claim 1 was not anticipated by Knuettel *et al.* Since claims 9 and 15-17 are dependant upon claim 1, it is respectfully submitted that they are also not taught by Knuettel *et al.*

The Examiner rejected claims 1, 10, 11, 13, 14, 19, 20, 22, 25-27, and 38-40 under U.S.C. 103(a) as being unpatentable over U.S. Patent 6,335,792 to Tsuchiya in view of U.S. Patent 6,662,042 to Grable. This rejection is respectfully traversed.

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Tsuchiya teaches a method and an apparatus for measuring an internal property distribution of a scattering medium, wherein light rays are injected into the medium, and collected therefrom, and are propagated between the source, medium, and detector via optics that are not free-space optics. The collection points are determined by placing the tip of a fiber on the object at a desired location. Grable teaches a method and an apparatus for imaging animal tissue by the employment of a scanning mechanism composed partly of free-space optics. The Examiner argued that the method taught by Tsuchiya, combined with the employment of free-space optics by Grable, would render obvious the present invention. The method and apparatus taught by Grable involves the radiation of a fan-shaped beam of light through a pre-determined arc, with the result that the medium is illuminated along a curve where the beam intersects the surface of the medium (column 5, lines 30-35). Since the beam illuminates more than one location on the medium, the method and apparatus taught by Grable is ineffective in selecting a pre-determined point to be illuminated as claimed in the present invention. Furthermore, in the method and apparatus taught by Grable, light received by any given detector might have emanated from any number of locations on the sample, as the light reaching the detectors is not restricted so as to emanate from a pre-determined location on the medium. In fact, it is clearly stated in Grable at column 5, lines 30-34 that "...the width of the fan is such that approximately 25% of the photodiode detector arrays 40 are thus illuminated at each rotational indexed position of the plate 26." Therefore, the method and apparatus taught by Grable is ineffective in selecting a plurality of pre-determined points from which light is collected, on an animal, as claimed in to the present invention. Neither does the method or apparatus taught by Tsuchiya teach how the free-space optics taught by Grable may be so employed, since Tsuchiya teaches selecting the collection points by placing a fiber at the desired location on the object (see column 26, lines 54-65).

Therefore, the disclosure by Tsuchiya, in light of the disclosure by Grable, does not teach the method in claim 1 nor the system in claim 22, nor any of the claims dependant upon claims 1 and claim 22.

Applicant has noted the allowable subject matter, but believes that the broad claims are patentable over the prior art.

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Applicant has also taken note of the additional prior art made of record but not relied upon.

Favourable reconsideration and Allowance are therefore respectfully requested.

Respectfully submitted,
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